



#23/D

SEQUENCE LISTING

RECEIVED
JUL 11 2002
TECH CENTER 1600/2900

<110> Farrar, Jane
Humphries, Peter
Kenna, Paul

<120> Genetic Suppression and Replacement

<130> MUR-003

<140> US 09/155,708

<141> 1999-04-05

<150> PCT/GB97/00929

<151> 1997-04-02

<160> 28

<170> PatentIn version 3.0

<210> 1

<211> 617

<212> DNA

<213> mammalian

<220>

<221> n

<222> (1)..(617)

<223> any

<400> 1

tccttntgn tagattgcan nccccataa aanaaggnc cgttaaagg cttatcgaaa 60
ttaatacgac tcactatang gagacccaag cttagagtca tccagctgga gccctgagtg 120
gctgagctca ggccttcgca gcattcttgg gtgggagcag coacgggtca gccacaaggg 180
ccacagccat gaatggcaca gaaggcccta acttctacgt gcccttctcc aatgcgacgg 240
gtgtggtacg cagccccttc gactaccac agtactacct ggetgagcca tggcagttct 300
ccatgctggc cgctacatg tttctgctga tcgtgctggg cttccccatc aacttctca 360
cgctctacgt caccgtccag cacaagaagc tgcgcacgcc tctcaactac atcctggctc 420
aacctagccg tggctgaact cttcatggtc ctangtggtc tcaccagcac cttacanct 480
ctctgcatgg atactcgtct tcgggcccac aggatgcaat tgganggctc tttgcacctg 540
nggggaatt gcctgtggtc ctngtggtcn ggncaccaac gtactggtn gtnntanccc 600
agaacaactc cgctccc 617

<210> 2

<211> 639

<212> DNA

<213> mammalian

<220>
 <221> n
 <222> (1)..(639)
 <223> any

<220>
 <221> misc_feature
 <223> C to G change at position 271

<400> 2
 ggnnnnttgg gtcgcgatt naagaactca nggncccgca gcattcttgg gtgggagcag 60
 ctacgggtca gccacaagg ccacagccat gaatggcaca gaangcccta acttctacgt 120
 gcccttctcc aatgcgacgg gtgtggtacg cagccccttc gagtaccac agtactacct 180
 ggctgagcca tggcagttct ccatgctggc cgctacatg tttctgctga tcgtgctggg 240
 cttccccatc aacttctca cgctctacgt gaccgtccag cacaagaagc tgcgcacgcc 300
 tctcaactac atcctgctca acctanccgt ggntgaactc ttcattgtcc taggtggctt 360
 caccancaac ctctanacct ctctgcatgg anacttctc ttccggccca caggatgcaa 420
 tttggaaggn ttcctttaac acccgggggg ggaaaattgc ctgtggctct tgggtgtccg 480
 gncancnaac ggtacttgtg gtnnttaanc cataaacaat tccgcttcgg gaaaaacatg 540
 ccancntggg gtttcttca ctnggttang ggcnggctgc cccacccca atcccnggtn 600
 gtcaantaat cccaagggcn nantgncntt ttaaacaaa 639

<210> 3
 <211> 686
 <212> DNA
 <213> mammalian

<220>
 <221> n
 <222> (1)..(686)

<220>
 <221> misc_feature
 <223> CCC to CTC change at 216-218

<400> 3
 nnnttagggn cgatgtcna tataagcaga nctctctggg ctaactaana agaaccact 60
 ggcttactgg cttatcgaaa ttaatacgac tcactatagg gagacccaag cttccggaaa 120
 gcctgagctc agccacaagg gccacagcca tgaatggcac agaaagccct aacttctacg 180
 tgcccttctc caatgcgacg ggtgtggtac gcagcctctt cgagtacca cagtactacc 240
 tggctgagcc atggcagttc tccatgctgg ccgcctacat gtttctgctg atcgtgctgg 300

gcttccccat caacttcctc acgctctacg tcaccgtcca gcacaagaag ctgcgcacgc 360
ctctcaacta catcctgctc aacctanccg tggctgaact cttcatgggc ctangtggct 420
tcaccancac cctctacacc tctctgcatg gatacttcgt cttccggggc acaggatgca 480
at ttggaagg cttctttgca ncctgggncg ggaaattgcc tgtngtctg gtggtcctgg 540
ccatcaacng tacttgttgt ntnttaccba tnaacaattc cgctccggga aaacatgcac 600
atgggnttgc ctactnngt ctggggcngg cnccccaccc ccccccggt ggtcanttat 660
cccanggcgn aatgcctttn annaaa 686

<210> 4
<211> 787
<212> DNA
<213> mammalian

<220>
<221> n
<222> (1)..(787)
<223> any

<400> 4
cngcncgttg aaatataagc agaccctctg gntaactana ataaccactg cttactggct 60
tatcgaaatt aatacgactc actatangga gaccaagctt ggtcggctctg atgagtccgt 120
gaggacgaaa cgtagagtct anagggccct attctatagt gtcacctaaa tgctaganct 180
cgctgatcag cctcgactgt gccttctagt tgccagccat ctgttgtttg cccctcccc 240
gtgccttctc tgancctgga aggtgccact cccactgtcc tttcctaata aaatgagnaa 300
ttgentctca ttgtctgagt agtgtcatcc aatctggggg tgggtggggc agnacacnag 360
gggaagatgg gaaaacatac aggcattgctg gggangccgt ggntctatgn ctngaggcg 420
aaaaaacact ggggnctagg ggtacccac cccctgtacg gccataacnc gnggtttgtg 480
gtaccacta acgtanntgc accctaccg ncttcttct cctcttncca tttccggttc 540
cctcaccnaa cgggccttng tcatatctng gnccaccaa tanagtagtc tttgccccca 600
aagtcctna tgacctntaa gaccttcann anccccctt ntttnaaana nccnnnnnn 660
nnnnnnnnnc cngnaaaaaa aacaactaat tttggaacc ccccccnaa aaccctttcc 720
ntnttcccc natttaant tnnntnccc ccccccccc ccccnnttt tnncccccn 780
nnannng 787

<210> 5
<211> 665
<212> DNA
<213> mammalian

<220>
 <221> n
 <222> (1)..(665)
 <223> any

<400> 5
 nccccgccc nttnnaana anccnagcct ctggcnaact ananaaccac tgcttactgg 60
 cttatcnaaa ttaatacgac tcaactatagg gagacccaag ctttactcga actgatgagt 120
 ccgtgaggac gaaaggctgc tctananggc cctattctat antgtcacct aaatgctaga 180
 gctcgctgat cagcctcgac tgtgccttct aattgccagc catctgttgt ttgcccctcc 240
 cccgtgcctt ccttgaccct ggaagggtgcc actcccactg tcctttccta ataaaatgaa 300
 gatnttncat cncattgtct gagtaagtgt cattctattc tggggggtgg ggtggggcac 360
 gacancaang gggaagattg ggaaaaaata ncaggcntgc tggggatncc gtgggctcta 420
 tngcttctga agcggaaaaa acaactgggg ctctangggg tatccccccc cccctgtaac 480
 gngcattaaa cncgggggtg ttgtggttac cccaacttaa cgctancttg caacgccna 540
 acgcccnc tttcctttct ccttccttc nccacttct cgggttccn tcaaccnaa 600
 tcggggcccc ttaggtccaa ttatgcttcg gcccncnccn aaactaatag gtnggttctt 660
 tngcc 665

<210> 6
 <211> 624
 <212> DNA
 <213> mammalian

<220>
 <221> n
 <222> (1)..(624)
 <223> any

<400> 6
 nnnncttntc tanngcttgg taccganctc ggatccacta gtnaacggcc gccagtgtgc 60
 tggaaattcc cagaggnact ctggggcaga caagatgaga caccctttcc tttctttacc 120
 taagggcctc caccgatgt caccttggcc cctctgcaag ccaattaggc cccggtggca 180
 gcagtgggat tagcgtagt atgatatctc gcggatgctg aatcagcctc tggcttaggg 240
 agagaaggtc actttataag ggtctggggg gggtcagtgc ctggagttgc gctgtgggag 300
 ccgtcagtgg ctgagctcgc caagcagcct tggctctgt ctacgaaan cccgtggggc 360
 agcctcnana accgcagcca tgaacggcac agaaggcccc aatttttatg tgcccttctc 420

caacgtcaca ngcgtgggtgc ggaacccctt cnancanccg cagtactacc tggcggaacc 480
atggcagttc tccatgctgg cācgtacat gtctgtctca tctgtctggg nttcccatca 540
actcctcacg ctctagttca ccgtaaanna naaaaaactg cgcaaccctt caactaaatc 600
ctgctcaatt gggcgtgggt gaac 624

<210> 7
<211> 630
<212> DNA
<213> mammalian

<220>
<221> n
<222> (1)..(630)
<223> any

<220>
<221> misc_feature
<223> TTT to TCT transversion at position 189-191

<400> 7
nnntcttcc nctttcgttt gttgnanant cannaanan aggcgncccg gaaggtgtca 60
gtgcctggag ttgcgtgtg ggaccctga ntggctgagc tcgccaagca gccttggctt 120
ctgtctacga agagcccggtg gggcagcctc gagagccgca gccatgaacg gcacagaggg 180
ccccaatttc tatgtgccct tctccaacgt cacaggcgtg gtgcggagcc ctttcgancn 240
tccgcagtac tacctggcgg aacctggca gttctccatg ctggcagcgt acatgttcct 300
gtcatcgtg ctgggcttcc ccatcaactt cctcacgctc tacgtcaccg tacagcacia 360
gaagctgcgc acacccctc aactacatcc tggctcaact tgggccgntg ggnttggaac 420
ctccttccca ttgggtcntt cccggaangg antncaccaa ccacccctct aacacatcaa 480
ctcccatggg ctacttcgtt cttttggggc ccncaggctg ttaatctcga agggcttctt 540
tgccacacct tggaagtga atnccctgt ggttccctgg tggctntggc cattaacgct 600
acttgtggtc ctgcaacca ataacaattc 630

<210> 8
<211> 649
<212> DNA
<213> mammalian

<220>
<221> n
<222> (1)..(649)
<223> any

<400> 8

tccccnntt tttgtagcnc tgccaanaaa aaaggccagc tcacaggana antananaac 60
 ccactgctta ctggcttanc naaattaata cgactcacta tagggagacc caagcttggc 120
 acatctgatg agtccgtgag gacgaaaaaa ttggtctaca gggccctatt ctataatgtc 180
 acctaaatgc tanagctcgc tgatcctcct cnactgtgcc ttctacttgc cagcctctn 240
 ttgtttgccc ctccccctg ccttccttga ccctggaagg tgccactccc actgtccttt 300
 cctaataaaa tgaggaaatt gcctgcatt gtctgagtaa gtgtcattct attctggggg 360
 gtgggggtggg gcaggacnnc aaaggggaag attgggaaat acaatancca aggancnctc 420
 cccnngggtta attgcggatt nggctctntc gcttccttaa ggcngaaana aacaactnng 480
 gcgctnccggg gtttccccc cccnccctnt tagcngcgca ttantcgccg cgggtgttgt 540
 tgttactccc cacctnaacg ctacanttgc cagcgcctaa cgccccccct tncntttctt 600
 cctcctttc tcncaacttc ccggttttc cnccaancc naaatcngg 649

<210> 9
 <211> 681
 <212> DNA
 <213> mammalian

<220>
 <221> n
 <222> (1)..(681)
 <223> any

<400> 9
 nnttgttggg ncagtnggat gtctatataa gcagagnctc tggctaacta gnagaaccca 60
 ctgcttactg gcttatcgaa attaatacga ctactatag ggagacccaa gcttgggtacc 120
 gagctcngat ccactagtaa cggccgccag tgtgctggaa ttcttcagcg cccacgacca 180
 gtgactatcc cctgtcgaag ctgtgattcc gagaccctg ccaccactac tgcattcacg 240
 ggggatccca ngctaattggg actcgacatg ggttgcccc acggcanctc cctacanctt 300
 gggccanctn cacttttccc aaagnccctaa atctccgcct ctgggtctnt taangttngg 360
 ggtgggganc tgtgctgtgg gaaacaaccc agaananact tgggcagcat gnggtactg 420
 aaagtncatt ttgaacagaa naaacggtcc antttggccc aaggnncnng ntcctaaant 480
 ggttctcct ntttggtn gn ntcnncctt tcncctnng aatgttctg aaaaattnaa 540
 cnccaaaaaa gaacaaattg aaaaatantt ctnaaaaccc ttttgttnc cccccccna 600
 aaaggaagg gngngnncc ttttnttcc cccccgggg ggggaaaatt tnnnnnaanc 660
 ccccccccc ccttttttn a 681

<210> 10
 <211> 612
 <212> DNA
 <213> mammalian

<220>
 <221> n
 <222> (1)..(612)
 <223> any

<400> 10
 ttatacnaca cactatangg agaccaagct tggtagcgag ctcgatcca ctagtaacgg 60
 ccgccagtgt gctggaattc ttcancgccc aggaccagga ctatcccctg ctcaagctgt 120
 gattccgaga cccctgccac cactactgca ttcacggggg atcccaggct agtgggacnc 180
 gacatgggta tccccaggg cagctcccta cagcttgggc catctgcact tttcccaagg 240
 ccctaagtct ccgcctctgg gctcgttaan gtntgggggtg ggagctgtgc tgtgggaaac 300
 aaccgggact acacttggca agcatggcgc tgctgaaagt caagtttgaa cagaaaaaan 360
 gggtaagtt ggcccaaggg ctctggctca gggaaactgg gttccccncc nngttttngg 420
 tttgntgca tcanctncca aaaanannnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 480
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 540
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 600
 nnnnnnnnnn nn 612

<210> 11
 <211> 20
 <212> DNA
 <213> Artificial sequence

<220>
 <221> misc_feature
 <223> Forward mutation primer

<400> 11
 catggcgctg ctgaaagtca 20

<210> 12
 <211> 20
 <212> DNA
 <213> Artificial sequence

<220>
 <221> misc_feature
 <223> Forward 359 mutation primer

<400> 12

catcttcagc ctgggactgt

20

<210> 13
<211> 610
<212> DNA
<213> mammalian

<220>
<221> n
<222> (1)..(610)
<223> any

<220>
<221> misc_feature
<223> A to G transversion at position 468

<400> 13
tttttntggn tntcnaatta atacgactca ctatagggag acccaagctt ggtaccgagc 60
tcggatccac tagtaacggc cgccagtgtg ctggaattct tcancgcca ggaccaggac 120
tatcccctgc tcaagctgtg attccgagac cctgccacc actactgcat tcacggggat 180
cccaggctag tgggactcga catgggtagc cccagggca gctccctaca gcttgggcca 240
tctgcacttt tccaaggcc ctaagtctcc gcctctgggc tcgttaaggt ttggggtggg 300
agctgtgctg tgggaagcaa cccggactac acttggcaag catggcgcta ctgaaagtca 360
agtttgacca gaaaaancgg gtcaagttgg gccaagggc tctgggctcn atgnaaacct 420
nggtttcccc cccctnttt gggctgggca tcatcatctt tcagcctggg antgttcctg 480
aanattgaac tcccaaagag ancgatgtga tgaataattc tgaaanccat tttgtgcccc 540
actcattgan aaggangggg tgnatcctgt ttcttctactc cctgntggaa aatgctacaa 600
nccctgaacc 610

<210> 14
<211> 679
<212> DNA
<213> mammalian

<220>
<221> n
<222> (1)..(679)
<223> any

<400> 14
cnttgggtgt nctgtcggnt gtctatataa gcagagctct ctggctaact agaagaaccc 60
actgcttact ggcttatcga aattaatacg actcactata gggagacca agcttacttt 120
cagctgatga gtccgtgagg acgaaagcgc catctagagg gccctattct atagtgtcac 180

ctaaatgcta gagctcgctg atcagcctcg actgtgcctt ctagttgcca gccatctgtt 240
 gtttgcctcc ccccgctgcc ttccttgacc ctggaagggt ccactccac tgcctttcc 300
 taataaaatg atgaaattgc atcgattgt ctgagtaggt gtcattctat tctggggggt 360
 ggggtggggca ngacancaag ggggaagatt gggaaaaca tncgcctg ctggggatgc 420
 ggtgggctct atggcttctg aggcgaaana acnctgggg tctngggggt tccncccc 480
 ctgtnnccgc cttannccg gggttttgtg ntccccccn ttancnntnn ttnnnnnncc 540
 ncccccnnc nntcnnttn tccnnnnnn tncnnttt nnnnngntc cnnnnnnnt 600
 nnnnnngggc ncnnnngntc cnntnnnncc ncnnnnnnn ncnnnnnnn nntntgngg 660
 cccnnnnn nnnnnnn 679

<210> 15
 <211> 691
 <212> DNA
 <213> mammalian

<220>
 <221> n
 <222> (1) .. (691)
 <223> any

<400> 15
 ntttntcct acgnccgtt taaananaac cagaccctt gganaattan atnnccactg 60
 cttactggct tategaaatc aatacgactc actatangga gaccaagct tacagtcct 120
 gatgagtcg tggagacgaa aggtgaatc tanagggccc tattctatag tgcaccta 180
 atgctagagc tcgctgatca gcctcgactg tgccttctaa ttgccagcca tctgtgttt 240
 gcccctccc cgtgccttcc ttgacctgg aagggtccac tccactgtc ctntccta 300
 aaaatgatga nttgcatcg cattgtctga gtaagtgtc ntctattctg gggggtggg 360
 tggggcanga cancaagggg gaagattggg aaaaacatn cacgcatgcc gggggatgc 420
 gtgggctctn ttngcntcng aaggcngaaa aaaacnactg gggccctang ggtnnccn 480
 tccccntgt aacngnctt naacnccggg gtttgtggt nncnancct ancnctnaac 540
 ttccnncccc nnnccccnct tcttccctt tctctccatc tcnctnttn cccgntctcc 600
 cttncactna aatgggggcc cctacnggn ctntntntct cttnnnnccn cccccnana 660
 natatnctng ntnnttcncc tctggcccc t 691

<210> 16
 <211> 805
 <212> DNA
 <213> mammalian

```

<220>
<221> n
<222> (1)..(805)
<223> any

<400> 16
ntcncgncat ttaancaggc caggncctacc gcnnnggtcca ngtagggccgg gagccccagc 60
aacgccggga aggccagcag cacccttggc accagtaagg ccgtttgctc caggattacc 120
angagggtcca acggggccgg agaggcctgg aanaccactt caccacgggg aaccggcggg 180
tcagtagga ccagcggtac caacagctcc aatttcaccc ttggggccag gggcacctgg 240
gaagcctgga nggccagcag accaatggga ccagcaggac cacggaccac acttccatca 300
ctgctttngc ncagctgggc aagggcacia cacttctctc tcacangaac ccacggctcc 360
tgtttnactg aattccattt cacagggcac agttcacctt cacacaagaa cacggntgtc 420
cttcatcatc agacatgttt ccctaagtct tgagcagant cagattcagg aaacacacac 480
ctttgtccac atctctncac agtctcggtt tcaggtagac tcccacctgc agaggcactg 540
accaacctga gacattgaca ttncagncca cagtctgaac tgagcgggca cgccatggcn 600
agtcatacct gtcagnatca tcttctctta ncattcccaa ngggcagaat gaaagctgac 660
tcccgaatgt cttattttta annanggttt naaanaannn nnnnnnnnnn nnnnnnnnnc 720
ccccccctt tngggtttat tatctatncc ncccntngga tatcttttcc ccnttntccc 780
ctnaaanttt tnttnttttt tnnnn 805

<210> 17
<211> 797
<212> DNA
<213> mammalian

<220>
<221> n
<222> (1)..(797)
<223> any

<400> 17
ccctttaaaa canggccagg aataccgcgg ggtccaggga ggccgggacc ccancaacgc 60
cggaangcc cagcagcacc cttggcacca gtaangccgt ttgctccagg attaccagga 120
ggtccaacgc ggccggagan gcctggaaga ccacttcacc acggggaacg gcgggaccag 180
cangaccagc gttaccaaca gctccaattt cacccttggg gccaggggca cctgggaagc 240
ctgganggcc agcagaccaa tgggancagc aggaccacgg gaccacactt ccatcnctgc 300
cnctggcacc agctgggcaa gggcacaaca cttctctctc acnaagaacc cacggntcct 360

```

gtttaactga attccatttc acagggcaca gttcaccttc anacagaaca cgggtgtcct 420
 tcatcatcaa acatntttcc tatnccttga gcagaatcag attcaggaac acacactttg 480
 tcacatctcc tcacagtctc ggtttcaggt aacactenca cctgcagagg cactgacnaa 540
 nctcaganat ttanattccn ctccncaggt tgaacttagg cgggccctnn catttggnnt 600
 gtcctaacct ntnggggggtt ttncctnnnn nnnnnnnnttt nacnantccc aanggggana 660
 ananagntga ctccatgtc ttnttntnaa aaggtttttn aaaaattaac cccccccctn 720
 ttgggttatt tatttttttt nccccccctt ttngngaancn tnnccccntt tcccccnna 780
 aanttttttn ttttttt 797

<210> 18
 <211> 697
 <212> DNA
 <213> mammalian

<220>
 <221> n
 <222> (1)..(697)
 <223> any

<400> 18
 nctttcnntc tnatncatan aagcaggccc tctnnaaaaa ctanantttc cactgcttac 60
 tggcttatcg aaancaatac gactcactat agggagaccc aagcttcggc ggctgatgag 120
 tccgtgagga cgaaaccagc atctagaggg ccctattcta tagtgtcacc taaatgctag 180
 agctcgtga tcagcctga ctgtgccttc tagttgccag ccatctgttg tttgccctc 240
 ccccggtcct tccttgaccc tggaagggtgc cactcccact gtcctttcct aataaaatga 300
 ngaaattgca tcgcattgtc tgagtangtg tcattctatt ctgggggggtg ggggtggggca 360
 ngacancaag ggggaagatt gggaanacaa taacaggcat gctggggatg cgggtgggctc 420
 tatggcttct gaggcggaaa gaaccaactg gggctctang gggatatccc acnccccgt 480
 taccggcgca ttaancgcgg ggggtgtgtg gttaccocna acttaacgct acacttgcca 540
 cgcctaacgc cctccttttc gcttcttctc tccttctccc acttccccgn tttcccttca 600
 actctaactg gggcncctta ggtccaatta atcttacggn cncacccaaa actnataggt 660
 aagtccttnt ggccccccaa aaaggttccc ctaaatg 697

<210> 19
 <211> 15
 <212> DNA
 <213> mammalian

<220>
 <221> misc_feature
 <223> human rhodopsin unadapted sequence with ribozyme cleavage site

 <400> 19
 tacgtcacccg tccag 15

 <210> 20
 <211> 15
 <212> DNA
 <213> mammalian

 <220>
 <221> misc_feature
 <223> human rhodopsin adapted sequence

 <400> 20
 tacgtgaccg tccag 15

 <210> 21
 <211> 15
 <212> DNA
 <213> mammalian

 <220>
 <221> misc_feature
 <223> mouse rhodopsin unadapted sequence with ribozyme cleavage site

 <400> 21
 aatttttatg tgccc 15

 <210> 22
 <211> 15
 <212> DNA
 <213> mammalian

 <220>
 <221> misc_feature
 <223> mouse rhodopsin adapted sequence

 <400> 22
 aatttctatg tgccc 15

 <210> 23
 <211> 15
 <212> DNA
 <213> mammalian

 <220>
 <221> misc_feature
 <223> human peripherin unadapted sequence with ribozyme cleavage site

 <400> 23
 gcgctactga aagtc 15

 <210> 24

<211> 15
 <212> DNA
 <213> mammalian

 <220>
 <221> misc_feature
 <223> human peripherin adapted sequence

 <400> 24
 gcgctgctga aagtc 15

 <210> 25
 <211> 15
 <212> DNA
 <213> mammalian

 <220>
 <221> misc_feature
 <223> human peripherin unadapted sequence with ribozyme cleavage site

 <400> 25
 agcctaggac tgttc 15

 <210> 26
 <211> 15
 <212> DNA
 <213> mammalian

 <220>
 <221> misc_feature
 <223> human peripherin adapted sequence

 <400> 26
 agcctgggac tgttc 15

 <210> 27
 <211> 15
 <212> DNA
 <213> mammalian

 <220>
 <221> misc_feature
 <223> human type I collagen 1A2 sequence with ribozyme cleavage site

 <400> 27
 gctggtcccg ccggt 15

 <210> 28
 <211> 15
 <212> DNA
 <213> mammalian

 <220>
 <221> misc_feature
 <223> human type I collagen 1A2 sequence (A)

 <400> 28

gctggaccg ccggt

15